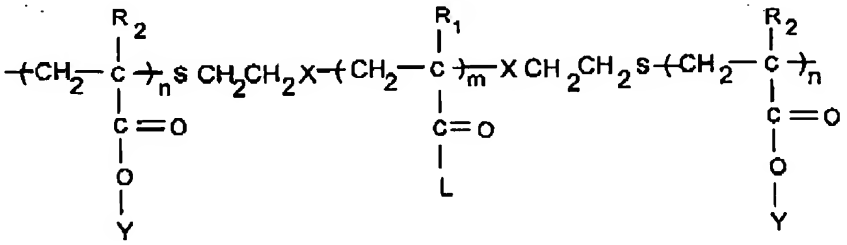
S/N 10/597,970

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) Tri-block copolymers of molecular weight ranging between 2,000 Daltons to 2[[,]]00,000 Daltons having formula (1), ~~having extraordinarily high binding strength,~~



Formula (1)

wherein,

R_1 is H, CH_3, C_2H_5, or C_6H_5; R_2 is H, CH_3, C_2H_5, or C_6H_5; here, R_2 at aforementioned two positions can be either identical or different; X is an ester or amide linkage; m is ranging from 3 to 500; n is ranging from 2 to 50; L is OH, NH_2, OCH_3, or $NHCH(CH_3)_2$; Y is *N*-Acetyl Glucosamine, mannose, galactose, sialic acid, fructose, ribulose, erythrolose, xylulose, psicose, sorbose, tagatose, glucopyranose, fructofuranose, deoxyribose, galactosamine, sucrose, lactose, isomaltose, maltose, cellobiose, cellulose, or amylose.

2. (Canceled).

3. (Original) The tri-block co-polymer as claimed in claim 1, wherein the said co-polymer shows about 11,000 times increase in the binding strength as compared to the ligand alone.

4. (Withdrawn) A simple and effective process for the preparation of tri-block copolymers of formula (1) of claim 1, said process comprises steps of:

a. dissolving the polymer of formula 3 bearing di-functional groups at both terminal ends in a solvent,
b. adding a polyvalent oligomer of formula 2 into the dissolved polymer of step (a) in the ratio of about 1:2 for di-functional group to polyvalent oligomer to obtain a reaction mixture,
c. dissolving a coupling agent to the reaction mixture in the ratio of about 1:1 to initiate the reaction,
d. allowing a reaction for a time duration ranging between 24 hrs to 48 hrs at room temperature ranging between 15 to 45^{0}C,
e. removing the unreacted coupling agent after the reaction by filtration to obtain tri-block polymer,
f. precipitating the tri-block polymer in a non-solvent at room temperature to obtain the dried tri-block copolymers.

5. (Withdrawn) A process as claimed in claim 4, wherein the polymers bearing di functional groups at both ends is selected from a group comprising acrylic acid, methacrylic acid, methacryloyl chloride, acrylamide, *N*-isopropyl acrylamide (NIPA), 2-acrylamido-2-methyl propanesulphonic acid (AMPS) methacrylate, acryloyl chloride, acryloyl morpholine, vinyl pyrrolidone, styrene, allyl alcohol, and allyl amine.

6. (Withdrawn) A process as claimed in claim 4, wherein the polymers bearing di functional groups at both ends contain COOH group.

7. (Withdrawn) A process as claimed in claim 4, wherein the polyvalent oligomer containing terminal reactive group ligands is selected from a group comprising polymethacryloyl NAG, polyacryloyl NAG, and Poly vinyl benzyl NAG.

8. (Withdrawn) A process as claimed in claim 4, wherein the oligomer containing terminal reactive group contain OH or NH_2 group.

9. (Withdrawn) A process as claimed in claim 4, wherein the organic solvent is selected from a group comprising dimethyl formamide, tetra hydro furan, and di-methyl sulfoxide.

10. (Withdrawn) A process as claimed in claim 4, wherein the coupling agent used is selected from a group comprising compounds Di Cyclohexyl Carbodiimide (DCC), 1-Cyclohexyl 3-(2- Morpholinoethyl) Carbodiimide metho-p-toluenesulfonate (CMC), and 1-Ethyl-3-(3-Dimethylamino-propyl) Carbodiimide (EDC).

11. (Withdrawn) A process as claimed in claim 4, wherein the molar ratio of coupling agent to polymer is about 1:1.

12. (Withdrawn) A process as claimed in claim 4, wherein the non-solvent is selected from a group comprising acetone, diethyl ether, hot water, and hexane.

13. (Withdrawn) A method of preventing and/or treating microbial infections, wherein the said method comprises steps of exposing the microbe to the pharmaceutically effective amount of tri-block copolymer of formula 1, and thereafter, binding of the polymer to the microbe inhibits the microbial infection.

14. (Withdrawn) A method of treatment as claimed in claim 13, wherein the possibility of drug resistance does not exist.

15. (Withdrawn) A method of treatment as claimed in claim 13, wherein the said method helps prevent and or treat infection caused by influenza virus, wheat germ agglutinin and rotavirus.

16. (Withdrawn) A method of treatment as claimed in claim 13, wherein the % increase in the relative inhibition of the microbe (I_{max}) is about 60%.

17. (Withdrawn) A method of treatment as claimed in claim 13, wherein the said co-polymer shows about 11,000 times increase in the binding strength as compared to the ligand alone.